

Brachytherapy in localized prostate cancer with or without androgen deprivation

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Purpose. Our aim was to compare cancer control and toxicity outcomes of hormonal therapy added to combination of external beam radiotherapy (EBRT) and local high-dose-rate (HDR) brachytherapy boost in patients with unfavorable prostate cancer as opposed to patients with the same radiation treatment without hormonal therapy.

Methods and materials. From January 2007 to November 2008, 62 patients with intermediate and high risk localized prostate cancer were enrolled in a randomized clinical trial. – First group received hormonal therapy added to combination of external beam radiotherapy (EBRT) and high-dose-rate (HDR) brachytherapy boost. – Second group received EBRT and HDR brachytherapy boost alone without hormonal therapy. The median follow-up was 60 months. Freedom from biochemical failure rates were calculated using the Phoenix definition. Toxicity was reported according to the Common Toxicity Criteria for Adverse Event, Version 4.0.

Results. No advantages in biochemical control could be detected between the patients receiving vs. not receiving hormonal therapy at 6 years with rates of 83% vs. 90%, respectively ($P=0.4$). Freedom for distal metastases and locoregional control did not differ significantly between patients receiving hormonal treatment with EBRT and HDR brachytherapy and those treated with EBRT and HDR brachytherapy boost alone with rates of 87%. No significant difference was detected with respect to toxicity between patients treated with vs. without hormonal therapy.

Conclusions. Hormonal therapy given as adjuvant therapy with combined implantation and EBRT in patients with unfavorable prostate cancer failed to improve biochemical control in our study.

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Brachytherapy on T1–T2 penile cancer. Initial experience

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Introduction. Penile cancer is a radio-curable disease. Brachytherapy has been proven to be a valid option in the treatment of the primary tumor for penis-preserving strategy.

Material and methods. The treatment was based on our standardized high dose interstitial brachytherapy technique applied in our institution for breast carcinoma. Special care for urethra preservation was taken. The procedure was performed by the collaborative effort between urologists and radiotherapy oncologists. Previous to treatment, circumcision was performed and pelvic lymphnodes in the CT were not observed. We placed plastic vectors in two planes. A previous CT simulation and a previous dosimetric study was performed. The EQD2 administered was 45–50 Gy with 4 Gy and BID fractionation administered during one or two weeks.

Results. Two cases of <4 cm squamous cell carcinoma were treated. One patient was 55 years old (T1) and the other was 66 years old (T2). The follow-up was 14 and 10 months respectively. Tolerance to treatment was good. Salvage surgery was performed in both cases and tumor free margins were described by the pathology. Treatment toxicity was edema and mucositis G2. One patient had bulbar urethral stricture, apart from the tumor area, related with urethral catheterization. Both cases preserved sexual function and satisfaction with the treatment was excellent.

Conclusions. The high dose interstitial brachytherapy is a safe and effective treatment for selected patients with T1–T2 penile carcinoma and negative lymphnodes. Penis-preserving strategy is associated with higher quality of life.

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Brachytherapy with 125-I seeds for prostate carcinoma: Learning curve

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Introduction. Brachytherapy with 125-I seeds in selected patient's with prostate carcinoma has great results if covering D90 and V100 of prostate, as ESTRO recommendations. Objective To analyze results and learning curve at our institution on incorporation of brachytherapy with permanent implants of 125-I seeds in prostate carcinoma with real-time planification and Quick-Link system.